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ABSTRACT

A survey was conducted of school media centers throughout the United States to determine: (1) how computers are being utilized by these centers, (2) the levels of satisfaction with present services, and (3) whether or not the services being provided by the computer are cost effective. Responses to survey forms returned by 20 school districts and six individual schools representing 15 different states indicated that computers are being used mainly for cataloging and reference searches in school districts utilizing computerized services, with cataloging being provided through a centralized support facility. Some schools are involved in networking, and some report using computers for acquisitions, overdue notices, online reference services, and/or circulation. About 82% of the school districts and individual schools responding indicated that they are highly satisfied with present computerized services; cost effectiveness could not be determined from the information provided. A copy of the questionnaire is appended. (LLS)

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Computers and Media Centers: Services, Satisfaction, and Cost Effectiveness

by

Patsy B. Givens

A Research Project Presented to
Dr. Atkinson
June 10, 1981

In partial fulfillment of the requirements
for the Education Specialist Degree, Library Media
Unit, college of Education, Georgia State University.

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Abstract

The purposes of this survey were three-fold: (1) to determine how computers are being utilized by school media centers throughout the United States, (2) to determine the levels of satisfaction with present services, and (3) to determine whether or not the services being provided by the computer are cost-effective. These purposes were accomplished by a computer survey. Subjects for this study were determined by the number of survey forms that were returned. Subjects included twenty school districts and six individual schools representing fifteen different states. Results indicated that computers are being used for cataloguing and reference searches in school media centers. Cataloguing is being provided through a centralized support facility. About 82% of the school districts and individual schools responding are highly satisfied with present computerized services. Cost effectiveness could not be determined from the information given in this survey.

Introduction

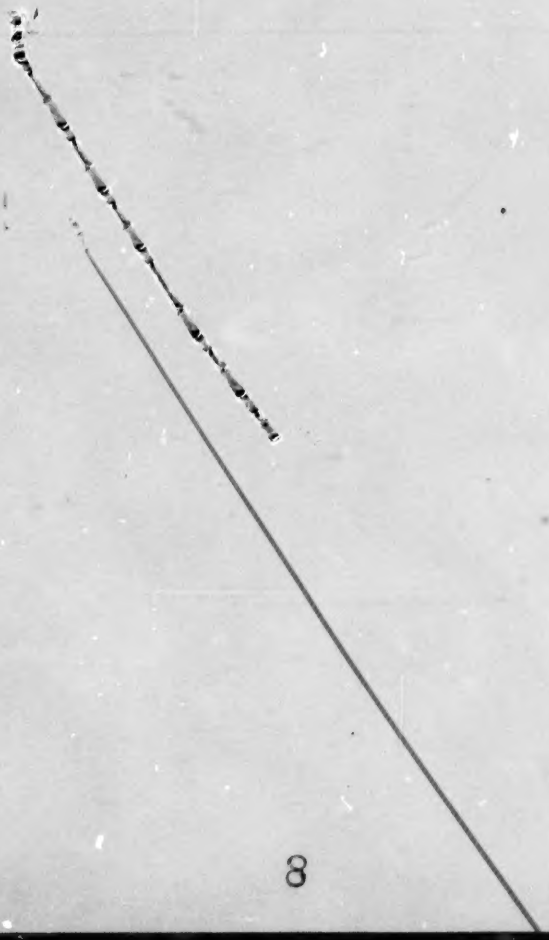
The main purpose of this study was to determine how computers are being utilized in school media centers throughout the United States for library management. Computers and microcomputers are being utilized for a variety of services in today's media centers. Circulation, acquisitions, cataloguing , and reference searches are important services that the computer can handle for today's media specialist. There are other services such as preparation of overdue notices, inventory, and the exact location of specific library materials to mention a few. Microcomputers are especially adaptable to these services. Some of the schools and school districts responding to this survey use microcomputers, but most do not. A secondary purpose of this study was to determine the level of librarian/user satisfaction. The last purpose was to determine if computers are more cost-effective than traditional methods. This survey was weak in this particular area.

The only other study conducted related to types of services being used in school media centers was conducted by Dan R. Twaddle and was reported in the Summer,1979 issue of School Media Quarterly. This study was not based on a sample, but it was determined from a survey of the literature. Only four school districts reported using the computer for technical service or library management. The survey I conducted reports on

twenty school districts. This is a large increase. Only four individual schools were using computers in the Twaddle study. I had only six responses from individual schools, two of which were used in the 1979 study.

Method

Seventy-one computer survey forms were mailed to various school districts and individual schools throughout the United States. A response was made to thirty-seven survey forms or 52% of those receiving a questionnaire responded to it. Of this total, only twenty-six computer survey forms or 37% were returned completed. Twenty of the surveys represented school districts and six represented individual schools.



Subjects

Subjects in this survey include twenty school districts and six individual schools. The school districts represent thirteen states including California, Colorado, Illinois, Indiana, Kansas, Maryland, Michigan, Minnesota, New Mexico, New York, Ohio, Oregon, and Texas. Several of these states had two or three respondents. Those with two respondents were Colorado and Illinois. In Colorado, a response was received from the Adams County School District and the Colorado State Library. The Colorado State Library provides service for the Denver School District. In Illinois, a response was received from East Peoria Elementary Schools. It is the only elementary school district to reply to the survey. Warrensville School District in Wheaton, Illinois also responded. Those states with three respondents were Michigan, and Indiana. In Michigan, responses were received from Battle Creek Public Schools, Lansing Public Schools, and Portage Public Schools. The supervisor from Portage Public Schools did not do a survey form, but wrote me anote regarding the type and number of computers being used, as well as, the number of schools using computerized services. In Indiana, responses were received from Gary School Corporation, Lafayette School Corporation, and Vigo County School Corporation. The supervisor from Vigo County did not fill out a survey form, but wrote me a note as to their computerized services.

Table 1

School Districts Responding to Computer Survey

1. Adams County School District No.12, Denver, Colorado
2. Albuquerque Public Schools, Albuquerque, New Mexico
3. Austin Public School Media, Austin, Minnesota
4. Battle Creek Public Schools, Battle Creek, Michigan
5. Cannon Falls School District 252, Cannon Falls, Minnesota
6. Denver School District, Denver, Colorado
7. East Peoria Elementary Schools, East Peoria, Illinois
8. Gary Community School Corporation, Gary, Indiana
9. Irving Independent School District, Irving , Texas
10. Lafayette School Corporation, Lafayette, Indiana
11. Lakewood Board of Education, Lakewood, Ohio
12. Lansing Public School District, Lansing, Michigan
13. Montgomery County Public Schools, Rockville, Maryland
14. Oswego County School Library System, Mexico, New York
15. Portage Public Schools, Portage, Michigan
16. San Mateo County Office of Education, Redwood City, California
17. Shawnee Mission Public Schools, Shawnee Mission, Kansas
18. Vigo County School Corporation, Terre Haute, Indiana
19. Warrensville School District, Wheaton, Illinois
20. Washington County Cooperative Library Service, Aloha, Oregon

Insert Table 1 here

The individual schools that responded to this survey represented five states including Georgia, Illinois, Kansas, Minnesota, and North Carolina. Of these, Georgia had two respondents. These were Dunwoody High School in Dunwoody, Georgia and Open Campus East in Stone Mountain, Georgia. Both of these schools are in the DeKalb County School System. Each high school in DeKalb County has a computer and/or a microcomputer, but not all of them are being used for library management purposes at this time.

Insert Table 2 here

It should be noted that all items on this survey were not responded to by all participants in this study. This means that a varied number of districts and individual schools are represented in each of the three sections of this survey.

Table 2

Individual Schools Responding to Computer Survey

1. Central High School- Red Wing, Minnesota
2. Dunwoody High School- Dunwoody, Georgia
3. Evanston Township High School- Evanston, Illinois
4. Leavenworth High School- Leavenworth, Kansas
5. Olympic High School- Charlotte, North Carolina
6. Open Campus East- Stone Mountain, Georgia

Results

Section 1 : Computer Services

The computer is mainly used for cataloguing and reference searches in school districts utilizing computerized services. Thirteen out of twenty school districts use it for cataloguing of both print and non-print materials. Ten of which are affiliated with OCLC. Ten school districts use the computer for online reference searches. Only five of these are affiliated with OCLC. Nine districts are involved in networking, six districts are using the computer for acquisitions, four districts are using the computer to produce overdue notices, and only one school district in this survey is presently using it for circulation of both print and non-print materials.

Insert Table 3 here

The most computerized school district in this survey is the Albuquerque Public Schools in Albuquerque, New Mexico. It now has five services which include circulation, cataloguing, acquisitions, reference searches, and networking. Battle Creek Public Schools in Battle Creek, Michigan now has four computerized services. This includes cataloguing, acquisitions, reference searches, and networking. Shawnee Mission Public Schools in Shawnee Mission, Kansas also has dour computerized services. These services are cataloguing, acquisitions, reference searches, and overdue notices for one high school.

Table 3

Services being utilized by school districts

Circulation:	Print	Non-print
1. Albuquerque Public Schools	x	x
Overdue Notices:	**Student**	**Faculty**
1. Cannon Falls School District 252	x	x
2. Shawnee Mission Public Schools	x	
3. Warrensville School District	x	x
4. Washington County System(WCCLS)	x	x
Cataloguing:	**Print**	**Non-print**
1. Adams County School District No.12	x	x
2. Albuquerque Public Schools	x	x
3. Austin Public Schools	x	x
4. Battle Creek Public Schools	x	x
5. East Peoria Elementary Schools	x	x
6. Gary Community School Corporation	x	x
7. Irving School District	x	x
8. Lafayette School Corporation	x	x
9. Lansing Public Schools	x	x
10. Montgomery County Public Schools	x	x
11. Oswego County School Library System	x	x
12. Shawnee Mission Public Schools	x	x
13. Vigo County School Corporation	x	x

Table 3

Reference Searches:	online	batch
1. Adams County School District	x	
2. Albuquerque Public Schools	x	x
3. Austin Public School Media	x	
4. Battle Creek Public Schools	x	
5. Denver School District	x	
6. Gary Community School Corporation	x	
7. Montgomery County Public Schools	x	x
8. Oswego County Library System	x	
9. San Mateo County Office of Education	x	
10. Shawnee Mission Public Schools	x	x
Networking:		
1. Adams County School District		
2. Albuquerque Public Schools		
3. Battle Creek Public Schools		
4. Cannon Falls School District 252		
5. East Peoria Elementary Schools		
6. Irving Independent School District		
7. Lafayette School Corporation		
8. Lansing Public School District		
9. Washington County Cooperative Library Service		

Table 3

Acquisitions:	Books	Periodicals	A-V
1. Albuquerque Public Schools	x	x	x
2. Battle Creek Public Schools	x	x	x
3. Gary School Corporation	x		x
4. Irving School District	x	x	x
5. Montgomery Co. Public Schools	x	x	x
6. Shawnee Mission Public Schools	x	x	x

Table 4

Existing services in school districts and plans for developing services

P - Plans to develop this service

A - Already has this service

N - Never plans to develop this service

NC - No plans to develop this service at this time

	Circulation	Overdue Notices	Cataloguing	Reference	Acquisitions	Networking
1. Adams County, Colorado	P	P	A	A	P	A
2. Albuquerque, New Mexico	A	P	A	A	A	A
3. Austin, Minnesota	P	P	A	A	NO	-
4. Battle Creek, Michigan	-	-	A	A	A	A
5. Cannon Falls, Minnesota	P	A	P	P	P	P
6. Denver, Colorado	-	-	-	A	-	-
7. East Peoria, Illinois	N	N	A	A	P	A
8. Gary, Indiana	-	P	A	-	A	-
9. Irving, Texas	P	P	A	P	A	A
10. Lafayette, Indiana	P	P	A	P	P	A
11. Lakewood, Ohio	P	P	P	P	P	P

Table 4

Existing services in school districts and plans for developing services

	Circulation	Overdue Notices	Cataloguing	Reference	Acquisitions	Networking
12. Lansing, Michigan	P	P	A	P	P	A
13. Montgomery County, Maryland	P	P	A	A	A	NO
14. Oswego County, New York	NO	NO	A	A	NO	-
15. San Mateo County, California	-	-	-	A	-	-
16. Shawnee Mission, Kansas	NO	A	A	A	A	NO
17. Vigo County, Indiana	-	-	A	-	-	-
18. Warrensville School District Wheaton, Illinois	P	A	P	A	P	P
19. Washington County, Oregon	P	A	P	A	P	A

Insert Table 4 here

From Table 4, one can conclude that many school districts plan to develop the service of circulation of print and non-print materials. Lakewood, Ohio schools have plans to develop all of the services listed on the computer survey, but now use the computer to monitor student progress and for instructional purposes. In Washington County, Oregon, only two school are using computerized overdue notices and networking services. Online searches are being used by the Washington County Co-operative Library Service (WCCLS). I received two different responses on two different computer survey forms, #105 and #114. I combined this information in Table 4. I also received two different responses from Montgomery County, Maryland. I combined the information given on survey forms 121 and 63 in Table 4.

Most school districts cannot locate print or non-print materials via computer. Only one district has the capacity to locate materials in seven of the eleven ways listed on item 7 in Section 1 of the computer survey, (See Appendix, p.i). The school district that I am referring to is the Battle Creek Public Schools in Battle Creek, Michigan. Only five others can locate materials at all. These are the Adams County School District in Colorado, Albuquerque Public Schools in New Mexico, East Peoria Elementary Schools in Illinois, Lafayette School Corporation in Indiana, and Shawnee Mission Public Schools in Kansas. All of these districts can identify whether or not a book is on interlibrary loan.

Insert Table 5 here

Table 5

School districts ability to locate materials via computer*

	a	b	c	d	e	f	g	h	i	j	k
1. Adams County School District						x			x		
2. Albuquerque Public Schools					x	x			x		
3. Battle Creek Public Schools	x	x		x		x	x			x	x
4. East Peoria Elem. Schools						x					
5. Lafayette School Corp.						x					
6. Shawnee Mission Schools					x	x			x		

* Refer to Computer Survey, Appendix, p.i.

Of the six individual schools responding to this survey, (See Table 2), four are using the computer to produce overdue notices, (See Table 6). These four schools are Central High School in Red Wing, Minnesota; Dunwoody High School in Dunwoody, Georgia; Leavenworth High School in Leavenworth, Kansas; and Open Campus East in Stone Mountain, Georgia. Four schools use the computer for cataloguing of non-print materials. These four are Central High School in Minnesota, Evanston Township High School in Illinois, Olympic High School in Charlotte, North Carolina, and Open Campus East in Stone Mountain, Georgia. Only Evanston Township High School uses the computer for cataloguing of both print and non-print materials. Only one school uses the computer for circulation of print and non-print materials and that is Leavenworth High School in Leavenworth, Kansas. None of the six schools responding to this survey are using microcomputers or computers for reference searches or networking at this time.

Insert Table 6 here

Four of the six individual schools that responded to this survey utilize only two computerized services in their individual media centers.

Insert Table 7 here

Table 6

Services being utilized by individual schools

Circulation :	Print	Non-print	
1. Leavenworth High School	x	x	
Overdue Notices:	Student	Faculty	
1. Central High School	x	x	
2. Dunwoody High School	x		
3. Leavenworth High School	x	x	
4. Open Campus East	x		
Cataloguing:	Print	Non-print	
1. Central High School		x	
2. Evanston Township High School	x	x	
3. Olympic High School		x	
4. Open Campus East		x	
Acquisitions:	Books	Periodicals	Audio-Visuals
1. Evanston Township High School	x		
2. Olympic High School			x

Note: None of the six individual schools are using the computer for reference searches or networking at this time.

Table 7

Existing services in individual schools and plans for developing services

P - Plans to develop this service

A - Already has this service

N - Never plans to develop this service

NO - No plans at this time to develop this service

	Circulation	Overdue Notices	Cataloguing	Acquisitions	Reference	Networking
1. Central High School	P	A	A	-	P	P
2. Dunwoody High School	NO	A	NO	NO	NO	NO
3. Evanston High School	P	P	A	A	P	N
4. Olympic High School	P	P	A	P	-	-
5. Leavenworth High School	A	A	P	P	P	P
6. Open Campus East	P	A	A	NO	N	NO

The computer is used mainly for producing overdue notices and cataloguing of non-print materials in individual schools.

As to the ability to locate materials, only two schools responded to item number 7 on Section 1 of the survey. Leavenworth High School can locate materials in five of the eleven ways listed on the survey form. Open Campus East can locate materials in one way.

Insert Table 8 here

Table 8

Individual schools ability to locate materials*

	a	b	c	d	e	f	g	h	i	j	k
1. Leavenworth High School	x	x							x	x	x
2. Open Campus East										x	

* Refer to Computer Survey, Appendix, p.i.

Other suggestions for computer usage

Suggestions of school districts and individual schools for computer usage are combined in this part of the paper. Library management suggestions include the integration of existing library resources into a microcomputer program, producing multi-media bibliographies, weeding the collection, the budget, producing a name-authority or corporate name and address authority, recording of circulation figures, records to justify budget requests, developing a catalog or network union list, and for inventory of all existing resources. Some suggestions given by media specialist were not library management oriented. These include the teaching of computer literacy skills, teaching library skills, monitoring a student's progress in reading, games,and programming other subjects. Using the computer for instructional purposes is a more predominate use in Lafayette School Corporation in Indiana and in Lakewood Public Schools in Ohio.

Most school districts indicated that cataloguing service is supplied by OCLC or through a centralized support service and that computers are not located in each individual school. Some districts do have computers in each school. Portage Public Schools in Michigan have a microcomputer in each school.(See Appendix, p.iv). Some districts have computers available for individual school usage. The number of computers in school districts can be found in Table 17.

Section 2: Levels of Satisfaction

This section of the computer survey was designed to measure the levels of satisfaction with present computer services. Seventeen school districts responded to this section of the survey. As to the overall level of satisfaction with computer services, fourteen districts gave a rating of 4 (high) or 5 (very high). Eight or one-half of the districts gave a rating of 5, (See Tables 9 and 10A). Six school districts rated user satisfaction based on empirical data as 4 (high). Five other school districts rated item 2 of Section 2 as 5 or very high, (See Table 10B). Most districts are satisfied with the number of services now provided for it by the computer. Eight districts rated this item with a score of 4(high). Four districts rated this item as 5 or very high,(See Table 10C). Thirteen of the school districts responding are satisfied with the type of computer they are now using. Six districts rated this item with a score of 4 (high). Seven districts rated this item as 5 or very high, (See Table 10D). Statement number 5 rates the level of satisfaction with networking services. Sixteen districts responded to this item, but only nine districts indicated the capacity for networking in Section 1 of the survey. This item was rated the lowest in both the 4 (high) and 5 (very high) categories. Only four gave a rating of 4 (high) and four districts gave a rating of 5 (very high). It is interesting that five districts gave this item a score of 3 or average level of satisfaction, (See Table 10E).

Table 9

Levels of satisfaction by school districts

	1	2	3	4	5	NA	No Response
1. Your overall personal level of satisfaction with computer services.	0	0	1	6	8	1	1
2. Your opinion of user satisfaction based on observation, empirical data, statistics, etc.	0	1	2	6	5	3	0
3. Level of satisfaction with the number of services provided.	0	2	2	8	4	1	0
4. Level of satisfaction with the type of computer you are using.	0	0	2	6	7	1	1
5. Level of satisfaction with networking service provided.	0	1	5	4	4	3	0
6. Level of satisfaction with vendor maintenance.	0	0	4	7	2	3	1
7. Level of satisfaction with vendor service.	0	0	1	8	2	3	3

Table 10A

School district's

level of overall personal satisfaction with

computer service

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools					x		
3. Austin Public Schools					x		
4. Battle Creek Public Schools				x			
5. Cannon Falls School District					x		
6. Denver School District							x
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation				x			
9. Irving School District					x		
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools				x			
14. Oswego County Library System			x				
15. Shawnee Mission Public Schools					x		
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)					x		

Table 10B

School district's

level of user satisfaction based on observation

or empirical data, etc.

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools				x			
3. Austin Public Schools			x				
4. Battle Creek Public Schools					x		
5. Cannon Falls School District					x		
6. Denver School District				x			
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation			x				
9. Irving School District					x		
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools		x					
14. Oswego County Library System						x	
15. Shawnee Mission Public Schools				x			
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)						x	

Table 10C

School district's

level of satisfaction with the number of services

provided

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools				x			
3. Austin Public Schools					x		
4. Battle Creek Public Schools				x			
5. Cannon Falls School District				x			
6. Denver School District				x			
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation				x			
9. Irving School District					x		
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools		x					
14. Oswego County Library System			x				
15. Shawnee Mission Public Schools			x				
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)		x					

Table 10D

School district's

level of satisfaction with the type

of computer being used

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools					x		
3. Austin Public Schools					x		
4. Battle Creek Public Schools			x				
5. Cannon Falls School District					x		
6. Denver School District							x
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation				x			
9. Irving School District					x		
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools				x			
14. Oswego County Library System				x			
15. Shawnee Mission Public Schools					x		
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)			x				

Table 10E

School district's

level of satisfaction with networking

services provided

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools				x			
3. Austin Public Schools					x		
4. Battle Creek Public Schools				x			
5. Cannon Falls School District				x			
6. Denver School District			x				
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation			x				
9. Irving School District					x		
10. Lafayette School Corporation					x		
11. Lakewood Public Schools						x	
12. Lansing Public Schools		x					
13. Montgomery County Public Schools						x	
14. Oswego County Library System			x				
15. Shawnee Mission Public Schools						x	
16. Warrensville School District			x				
17. Washington County Cooperative Library Service (WCCLS)			x				

Table 10F

30

School district's

level of satisfaction with

vendor maintenance

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools				x			
3. Austin Public Schools			x				
4. Battle Creek Public Schools			x				
5. Cannon Falls School District				x			
6. Denver School District							x
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation			x				
9. Irving School District				x			
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools			x				
14. Oswego County Library System				x			
15. Shawnee Mission Public Schools						x	
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)						x	

Table 10G

School district's

level of satisfaction with

vendor service

	1	2	3	4	5	NA	No Response
1. Adams County School District				x			
2. Albuquerque Public Schools				x			
3. Austin Public Schools				x			
4. Battle Creek Public Schools			x				
5. Cannon Falls School District				x			
6. Denver School District							x
7. East Peoria Elementary Schools					x		
8. Gary Community School Corporation							x
9. Irving School District				x			
10. Lafayette School Corporation					x		
11. Lakewood Public Schools				x			
12. Lansing Public Schools				x			
13. Montgomery County Public Schools				x			
14. Oswego County Library System							x
15. Shawnee Mission Public Schools						x	
16. Warrensville School District						x	
17. Washington County Cooperative Library Service (WCCLS)						x	

The level of satisfaction with vendor maintenance was given a rating of 4 (high) by seven school districts and a rating of 5 (very high) was given by only two school districts,(See Table 10F). A similar rating was given to level of satisfaction with vendor service. This differs from general maintenance in that service would involve dealing with an unexpected problem with the computer hardware. Eight school districts rated this item as 4 or high. Only two districts gave a rating of 5 or very high,(See Table 10G).

Insert Table 9 here

Insert Tables 10A-10G here

Some generalizations can be made about the individual schools responding to Section 2. The only item that received a high rating was number one. This dealt with overall level of satisfaction with computer services. Four of the individual schools gave this a 4 or high rating,(See Tables 11 and 12A). Five of the six schools gave a 4 (high) or 5 (very high) to item two which deals with user satisfaction based on empirical data,(See Table 12B). Satisfaction with the number of services for individual schools is very low. Four out of six schools rated this item as 1 (very low), (See Table 12C). Only two schools gave the level of satisfaction with type of computer you are using a 3 or average rating,(See Table 12D). Four schools

indicated not applicable on items five, six, and seven, (See Tables 12E, 12F, and 12G).

Insert Table 11 here

Insert Tables 12A-12G here

Only two of the seventeen districts indicated an increase in circulation due to computer usage. These two were Albuquerque Public Schools in New Mexico and East Peoria Elementary Schools in Illinois. Individual schools reporting an increase in circulation were Evanston High School in Illinois, Leavenworth High School in Kansas, Olympic High School in Charlotte, North Carolina and Open Campus East in Stone Mountain, Georgia. Most media specialist agree that their increase is due to the fact that teachers now have print-out and know what is available without coming to the media center. As people become more familiar with computers, services will increase.

Some specific benefits to students that have resulted from computer usage include: 1. Faster location of materials due to using a print-out, rather than the card catalog. 2. More reliable overdue and missing records can be kept. 3. The student receives a legible overdue notice more quickly. 4. Identification of materials that need to be purchased for student usage. 5. Access to information through online data bases for topical reference searches.

6. The development of a county-wide union list for inter-library loan and reference purposes. 7. Students become more aware of the need to be computer literate in our society.

Media directors responding indicated that media specialists and students have been very accepting of the changes brought about by computer technology. Most districts responding indicated plans to expand present services, (See Table 4). This implies a high level of satisfaction with the services now being received by school districts, (See Table 10C).

Table 11

Levels of satisfaction by individual schools

	1	2	3	4	5	NA	No Response
1. Your overall personal level of satisfaction with computer service.	1	0	0	4	1	0	0
2. Your opinion of user satisfaction based on observation, empirical data, statistics, etc.	0	1	0	3	2	0	0
3. Level of satisfaction with the number of services provided.	4	1	0	1	0	0	0
4. Level of satisfaction with the type of computer you are using.	1	0	2	1	1	0	1
5. Level of satisfaction with networking services provided.	0	1	0	0	0	5	0
6. Level of satisfaction with vendor maintenance.	0	1	0	1	0	4	0
7. Level of satisfaction with vendor service.	0	0	1	1	0	4	0

Table 12A

Individual school's

level of overall personal satisfaction

	1	2	3	4	5	NA	No Response
1. Central High School				x			
2. Dunwoody High School					x		
3. Evanston Township High School	x						
4. Leavenworth High School				x			
5. Olympic High School				x			
6. Open Campus East				x			

Table 12B

Individual school's

level of user satisfaction based on

observation or empirical data, etc.

	1	2	3	4	5	NA	No Response
1. Central High School				x			
2. Dunwoody High School					x		
3. Evanston Township High School				x			
4. Leavenworth High School					x		
5. Olympic High School		x					
6. Open Campus East				x			

Table 12C

Individual school's

level of satisfaction with

the number of services provided

	1	2	3	4	5	NA	No Response
1. Central High School		x					
2. Dunwoody High School	x						
3. Evanston Township High School	x						
4. Leavenworth High School	x						
5. Olympic High School	x						
6. Open Campus East				x			

Table 12D

Individual school's

level of satisfaction with

the type of computer being used

	1	2	3	4	5	NA	No Response
1. Central High School					x		
2. Dunwoody High School				x			
3. Evanston Township High School							x
4. Leavenworth High School	x						
5. Olympic High School			x				
6. Open Campus East			x				

Note: Evanston Township High School did not respond to this item, but wrote "getting a new computer next week" in the space on the computer survey.

Table 12E

Individual school's

level of satisfaction with

networking service provided

	1	2	3	4	5	NA	No Response
1. Central High School							x
2. Dunwoody High School							x
3. Evanston Township High School							x
4. Leavenworth High School		x					
5. Olympic High School							x
6. Open Campus East							x

Table 12F

Individual school's

level of satisfaction with

vendor maintenance

	1	2	3	4	5	NA	No Response
1. Central High School				x			
2. Dunwoody High School						x	
3. Evanston Township High School						x	
4. Leavenworth High School						x	
5. Olympic High School						x	
6. Open Campus East	x						

Note: The response of NA by four schools is puzzling unless it means that the media specialist has had no experience with vendors and that maintenance is provided for the school's computer syste by someone other than the media specialist.

Table 12G

Individual school's

level of satisfaction with

vendor service

	1	2	3	4	5	NA	No Response
1. Central High School				x			
2. Dunwoody High School						x	
3. Evanston Township High School						x	
4. Leavenworth High School						x	
5. Olympic High School						x	
6. Open Campus East			x				

Section 3: Cost Effectiveness

Cost effectiveness was difficult to measure due to the lack of a response to all items in Section 3 by responding school districts. An OCLC cost sheet was used to determine actual costs for districts on OCLC. Twelve districts responding are currently using OCLC services, (See Tables 13 and 13A). Whether computer usage has increased or decreased the cost of operating a media center in a school district could not be determined from the information given by districts not on OCLC. Eight districts not on OCLC responded to this survey. The initial cost of purchasing a large computer varied. OCLC users pay $3,700. The Albuquerque Public Schools in New Mexico paid $75,000 for a Honeywell Level 6 Computer. Montgomery County Public Schools in Rockville, Maryland gave a charge of $50,000. They are using an IBM 370/158 Computer. They use BATAB and Mini*Marc services and a fee of $5,000 was given for vendor charges. Albuquerque's vendor charges are included in the initial computer charge. As for yearly maintenance, OCLC users pay a basic charge of $396.00; wheras, Albuquerque Public Schools indicated a fee of $6000 for maintenance. Other districts gave smaller charges. Most did not respond to all items in this section of the survey.

Insert Table 13 here

Insert Table 13A here

Individual schools responding did not give sufficient information to determine cost effectiveness. Open Campus East in Stone Mountain, Georgia reported an initial cost of $5,000, while Central High School in Red Wing, Minnesota reported a cost of $2,500 plus $1000 for a printer. For types of computers being used by individual schools, see Table 18.

Since previous operating costs of school districts and individual schools were not reported, no comparison as to cost effectiveness can be made from this study. Over a long term period of time, the cost effectiveness of computerized service would be more obvious.

Approximately 710 school media centers receive computerized service. These services vary from state to state, (See Table 3). From the information given on the survey, 1968 is the earliest date given for computer service in a school district. Lakewood Public Schools in Ohio, San Mateo County in California, and Shawnee Mission Public Schools in Kansas each acquired computer service in 1968.

Table 13

OCLC users that responded to this survey

1. Adams County School District, Colorado
2. Austin Public Schools, Minnesota
3. Battle Creek Public Schools, Michigan
4. East Peoria Elementary Schools, Illinois
5. Gary Community School Corporation, Indiana
6. Irving Independent School District, Texas
7. Lafayette School Corporation, Indiana
8. Lakewood Public Schools, Ohio
9. Lansing Public Schools, Michigan
10. Oswego County School Library System, New York
*11. Portage Public Schools, Michigan
12. Vigo County School Corporation, Indiana

* Portage Public Schools responded only to Section 3 of this survey, it was not included in Section 1, Table 3.

Table 13A

OCLC Costs

REQUIRED EXPENSES

One-time investment:	
OCLC terminal	$3,700
Modem installation	148
Electrical outlets	100
Profiling charges	varies
Operating expenses:	
Annual terminal maintenance	396
Cataloguing charges	1.81 x titles per year
Card Costs (average 5 cards per title)	.042 x number of cards

OPTIONAL EXPENSES

One-time investment:	
Printer	$1905
Operating expenses:	
Annual printer maintenance charge	312
OCLC Interlibrary loan charges	.95 x no. of requests
Retrospective conversion	.05 x no. of titles
Archive tapes	25.00 per tape +.04 per record
Name-Address Directory	FREE
Name-Authority File	FREE
Journal check-in	.039 per issue
Public Use	.026 per search

From: East Peoria Elementary Schools, January 1981 Costs

Insert Table 14 here

Of the six individual schools responding to this survey, only two have had service for more than ten years. Evanston Township High School in Illinois began using the computer in September of 1964. Leavenworth High School in Kansas began using the computer for media services in 1967.

Insert Table 15 here

Thirteen school districts responded to item number 12 in Section 3 of the computer survey. Results indicate that most districts are funded locally. Sometimes, state or federal funds supplement local funding. This was true for seven of the thirteen districts responding.

Insert Table 16 here

All individual schools that responded indicated that their computer was purchased with local funds. As to the type of computer now being used, twelve districts use an OCLC terminal. These districts are listed in Table 13. The other types of computers being used by OCLC users and other school districts are listed in Table 17.

Table 14

Number of schools in each district and

date computer service began

	Number of schools	month/year
1. Adams County School District	29	11/78
2. Albuquerque Public Schools	112	1979
3. Austin Public Schools	9	8/80
4. Battle Creek Public Schools	-	-
5. Cannon Falls School District	3	11/80
6. Denver School District	118	-
7. East Peoria Elementary Schools	8	9/80
8. Gary School Corporation	40	10/74
9. Irving School District	26	1974
10. Lafayette School Corporation	15	1/79
11. Lakewood Public Schools	14	1968
12. Lansing Public Schools	-	-
13. Montgomery County Schools	185	1972
14. Oswego County Library System	51	6/80
15. Portage Public Schools	15	1979
16. San Mateo County	-	1968
17. Shawnee Mission Public Schools	64	Spring, 1968
18. Vigo County School Corporation	-	-
19. Warrensville School District	19	-
20. Washington County (WCCLS)	2	-

Table 15

Individual schools and date computer service began

	month/year
1. Central High School Red Wing, Minnesota	5/79
2. Dunwoody High School Dunwoody, Georgia	12/80
3. Evanston Township High School Evanston, Illinois	9/64
4. Leavenworth High School Leavenworth, Kansas	1967
5. Olympic High School Charlotte, North Carolina	-
6. Open Campus East Stone Mountain, Georgia	9/80

Table 16

How funding was provided for school districts

to buy computers

T - Title IVB

L - Local funding

S - State funding

F - Federal funding

	T	L	S	F
1. Albuquerque Public Schools	x	x		
2. Austin Public Schools		x		
3. Battle Creek Public Schools		x		
4. Cannon Falls School District	x	x		
5. Denver School District			x	
6. East Peoria Elementary Schools*			x	
7. Gary School Corporation				x
8. Irving School District		x		
9. Lafayette School Corporation		x	x	
10. Lakewood Public Schools	x	x		
11. Montgomery County Public Schools		x		x
12. Oswego County Library System			x	
13. Warrensville School District	x			x

* LSCA Grant

Insert Table 17 here

Insert Table 18 here

Two high schools in Georgia use microcomputers such as the TRS-80. Evanston Township High School and Leavenworth High School use IBM computers.

Only eleven school districts responded to item 13 which stated, "Has the number of staff members increased or decreased since you began using computerized services?" Six districts indicated that staff members had neither increased or decreased. Four indicated a decrease and only one district indicated an increase in staff members, (See Table 19). Only eight school districts responded to item 14 which stated, "Has daily operations shown an increase or decrease cost-wise, since you began using computerized services?" Seven districts indicated an increase cost-wise. One district indicated a decrease cost-wise, (See Table 19).

Insert Table 19 here

From Table 19, one could conclude that computerized media service is not cost effective at this time. With the advent of

microcomputers, cost effectiveness is possible. If a microcomputer is attached to a larger unit in a central facility, services are likely to improve and increase, and over a long period of time, it could prove to be cost effective. The fact that microcomputers are less expensive does not change the fact;however, that services provided through a single in-house microcomputer are definitely limited.

Insert Table 19 here

Table 17

Type and number of computers being used by school districts

(See Table 13 for OCLC users.)

	Type of Computer
1. Albuquerque Public Schools	1 Honeywell Level 6
2. Cannon Falls School District	2 Apple II's
3. Irving School District*	1 Commodore PET
4. Lakewood Public Schools*	1 Digital Wang, 1 TRS-80
5. Montgomery County Schools	1 IBM 370/158
6. Portage Public Schools*	15 Commodore PETS, 1 Apple II
7. San Mateo County (SMERC)	1 Apple II, 1 Atari 800, 1 Radio Shack TRS-80, 1 Commodore PET
8. Shawnee Mission Public Schools	1 IBM 370
9. Warrensville School District	7 Apples

*Also using OCLC

Table 18

Type of computer being used by individual schools

	Type of Computer
1. Dunwoody High School	1 microcomputer
2. Evanston Township High School	1 IBM computer
3. Leavenworth High School	1 IBM System III
4. Open Campus East	1 Radio Shack TRS-80

Table 19

Responses to items 13 and 14 of Section 3

N - Neither an increase or decrease

D - Decrease

I - Increase

	13	14
1. Adams County School District	D	I
2. Albuquerque Public Schools	N	I
3. Austin Public Schools	N	I
4. Cannon Falls School District	N	D
5. East Peoria Elementary Schools	N	-
6. Gary School Corporation	N	I
7. Irving School District	N	I
8. Lafayette School Corporation	D	-
9. Montgomery County Schools	D	I
10. Oswego County Library Sustem	I	-
11. Shawnee Mission Public Schools	D	I

Conclusions and Discussion

Many more school districts will adopt computerized services system-wide. Many more computer services will be developed at the building level. This is due to the time saving factor built into a computer system, not to cost effectiveness of the computer system. Since clerical duties will be minimized, the media specialist will be able to work with students on an individual or small group basis. Computers will help the media specialist teach media skills , as well as locate materials more easily. The computer age is here. We as media specialist must be able to use it for library management and as a teaching tool with competence.

Limitations of this survey

One limitation of this survey was the length of the questionnaire. Several respondents did not complete the entire questionnaire. Each section needs some revision. Items that were not responded to should be omitted unless that information was vital in accomplishing the purposes of the survey.

Time was another limitation. The typing and revising of this paper took more time than was anticipated. Also, analyzing results was time consuming.

Drawing conclusions based solely on the information given in this survey is a limitation. The analyzing of one school in a district would be a better way of determining cost effectiveness. Each district would have to be analyzed individually in order to determine whether or not computer usage was definitely cost effective. More information would be needed from each district.

References

1. "The Role of the School Library Media Program in Networking." Resources in Education, (RIE), July-December, 1979, ED 168 599.
2. Twaddle, Dan R. "School Media Services and Automation." School Media Quarterly, Summer 1979, 257-262.

Note: These are the main sources from which I acquired names and addresses of schools and school districts. I used an OCLC list of school districts using OCLC services as of August 22,1980.

APPENDIX

2580 DeLowe Drive
East Point, Ga. 30344
March 11, 1981

Dear Media Specialist,

This survey is designed to determine the types of computerized services being utilized in school media centers throughout the United States. Other aspects of this survey include librarian/user satisfaction. I am also trying to measure cost effectiveness.

I appreciate your taking the time to answer this questionnaire. I feel that library service via computer is an area that hasn't yet been fully explored. Thank you for sharing information about your media center with me.

Sincerely,

Patsy B. Givens

Patsy B. Givens
Media Specialist
Conley Hills School

COMPUTER SURVEY
SECTION 1: COMPUTER SERVICES

Here is a list of computerized services that could be utilized by a school media center. Please indicate which of these services you are now using by checking the appropriate column below.

	Yes	No	Never plan to use this service	Plans to develop this service are being considered
1. Circulation				
a. Print				
b. Non-print				
2. Overdue notices				
a. Student				
b. Faculty				
3. Cataloguing				
a. Print Materials				
b. Non-print Materials				
4. Acquisitions				
a. Books				
b. Periodicals				
c. Audio-visual materials				
5. Reference Searches				
a. On-line				
b. Batch				
6. Networking				
a. On-line				
7. Ability to locate materials in the following ways:				
a. Checked out by student				
b. On loan to faculty member				
c. Reserve collection				
d. At the bindery				
e. Being recatalogued				
f. On interlibrary loan				
g. In closed stacks				
h. Being used in a display				
i. In the professional collection				
j. Missing				
k. Lost				

8. Any other suggestions or ways computers can be used in a school media center.

SECTION 2: LEVELS OF SATISFACTION

This section of the survey is designed to determine the level of satisfaction with your present services. Rate each statement on the scale below by circling one number for each statement. If the statement is not applicable to your situation, circle NA.

	Very Low				Very High	
1. Your overall personal level of satisfaction with computer services.	1	2	3	4	5	NA
2. Your opinion of user satisfaction based on observation, empirical data, statistics, etc.	1	2	3	4	5	NA
3. Level of satisfaction with the number of services provided.	1	2	3	4	5	NA
4. Level of satisfaction with the type of computer you are using.	1	2	3	4	5	NA
5. Level of satisfaction with networking services provided.	1	2	3	4	5	NA
6. Level of satisfaction with vendor maintenance.	1	2	3	4	5	NA
7. Level of satisfaction with vendor service.	1	2	3	4	5	NA

8. Add any comment here that you feel is related to librarian/user satisfaction that is not covered in questions 1-7.

9. Has there been an increase in circulation since you started using the computer? (yes/no)
10. Has the increase been substantial or has it been only a slight increase? Please explain below.

11. List some specific benefits to students that have resulted from computer usage.

SECTION 3: COST EFFECTIVENESS

This section is designed to determine cost effectiveness of present services. Write NA if not applicable to your media center.

1. Initial cost of computer_____
2. Maintenance charges (yearly)_____
3. Software_____
4. Vendor charges_____
5. Catalog cards_____
6. First time user charge_____
7. Marc tapes_____
8. Local costs (yearly)
   a. Furniture_____
   b. Supplies_____
   c. Personnel_____
9. Other:

   _____

   _____

10. The date (month/year) you began using computerized service._____

    _____

11. Number of schools in your district (for district media directors only).

    _____

12. How was funding provided for the purchase of your computer and related hardware?_____

    _____

    a. Manufacturer and model of computer you have._____

    _____

13. Has the number of staff members increased or decreased since you began using computerized services?_____
14. Has the daily operations shown an increase or decrease cost-wise since you began using computerized service?_____

Please return this questionnaire by March 20, 1981 so that I may include it in my survey results. If you would like a copy of the results, circle YES and fill in the spaces below.

I would like a copy of the results of this survey. (YES/NO)

Name of person who filled out survey questionnaire:_____

Title:_____
Address:_____
_____
_____

Portage Public Schools
Portage, Michigan

A - Apple II

CP- Commodore PET

Name of School	Type of Microcomputer	Date usage began
1. Amberly	CP	1979
2. Angling Road	CP	1979
3. Central Elementary	CP	1979
4. Haverhill	CP	1979
5. Lake Center	CP	1979
6. Lexington Green	CP	1979
7. Milham	CP	1979
8. Ramona Lane	CP	1979
9. Waylee	CP	1979
10. Woodland	CP	1979
11. Central Junior	CP	1979
12. North Junior	CP	1979
13. West Junior	CP	1979
14. Central High	CP	1979
15. Northern High	CP , A	1979

Red Wing Public Schools

School District 256 Red Wing, Minnesota 55066

D. B. Mjoleness, Superintendent

11/7/80

Copies of developed programs for use in Media Centers are available from Dick Chase, School District 256, Red Wing, MN 55066.

Overdue Notice Program	$50.00
Paperback Catalog	$50.00
Inventory Program	$50.00

The above programs require one disk and a printer. The cost includes a copy of the program in format to work with your Apple Computer, directions for use, and minor modifications to help tailor a program for your situation. Permission to duplicate by your district, and guides and a manual for operation is also included.

Any programs District 256 sells will give us more money to develop new programs which will be useful and helpful in the area of Media Center Administration. We feel we are offering a service to other schools, in making these programs available. The programs are not perfect, but they have been tested, revised and in use for some time in the Central High School Media Center.

If you would like additional information, please contact me at the above address or phone me at 612-388-7181.

Equal Opportunity in Education and Employment

COMPUTERS AND THE MEDIA CENTER

Richard Chase
Central High School, Red Wing

Red Wing High School has about 850 students and is involved in many areas which require considerable staff time. In May, 1979, the district purchased an Apple II with two disks. This fall it was increased to 48K updated to 3.3 DOS and a printer was added. The Apple II can be used by the Media Center in many ways. The demonstration today will include only Media Center Administrative tasks which can be accomplished easily and in much less time than the former hand done method.

These are the programs which have been developed and are in use at the present time:

(1) Overdue Notices.
This program is versatile and a time saver. Each week we have about 250 overdue items, most of which carry over to the next week. Program prepares overdue notice in sequential order by period and room number. Program also has an audit list which is arranged by call number of material and is useful in deleting returned items. 600 overdues can be stored on one disk, with about 1200 items on two disks.

(2) Inventory Program.
This program stores type, brand, model, year purchased, cost, location and accession number of equipment or inventory item. 1500 items can be stored on 2 disks. Program also will delete, change and add to current inventory. Items can be sorted and printed in any one or combination of procedures.

(3) Paperback Catalog.
Program manages a collection of up to 2000 titles. Catalog is printed in Author and Title sequence. Labels are printed when material is entered for each book. (1.e.) author, title, copy number, accession number, is included on the label. Inventory can be taken using accession number.

(4) Lists.
Magazines, video tapes, microfiche and record collections change frequently and need to be up-dated.

All programs have many things in common. They need to add new items, delete items, sort items, make minor changes and print out information. The Apple with a high speed sort can sort 2000 items in 15 seconds if they are in memory. The slowest part seems to be input from disk to memory. At present 48K RAM is adequate. The greatest limitation seems to be the floppy disks. One disk will store 120K or 1200, 100 Byte files or 2000, 60 Byte files using more disks is possible, but creates programming problems. At present it isn't possible to put collections over 2000 on a 2 disk system.

In the future the new hard disks which will store from two to twenty million bytes and up will make it possible to have a 20,000 or larger collection on line. Word processing, budget reports, preparation and inventory of purchase orders, circulation reports, and evaluation reports are a few possibilities for the future.

Our goal is to use the computer when it is practical and hopefully, the price of mass storage units will drop and be readily available. At present, a Corvus hard disk system which stores 10 million bytes costs around $5,000 and rises to $8,000 with a back-up unit.

Another problem with using a computer is finding software. Commercial programs are not available and there are many computer systems.